

### **REMARKS**

Claims 1-4 and 6-9 are pending in this application. Reconsideration of the rejections in view of these amendments and the following remarks is respectfully requested.

#### **Examiner's Interview**

Examiners' interview was conducted on December 3, 2003. Applicant and Applicant's representative appreciate the Examiners' courtesies extended during the interview. In the interview, explanation of the technology and the distinction between the present invention and the prior art was made. Applicant's representative also presented proposed amendments and Applicant's arguments against the rejections other than art rejections. Examiners stated that they understood Applicant's arguments and stated that those amendments and arguments will be considered when a response is filed responding to the Final Office Action.

The substance of the interview is reflected in the remarks below.

#### **Allowable Claims**

Applicant gratefully acknowledges that claim 4 has been indicated to be allowable if rewritten to overcome the rejections under 35 USC §112.

#### **Rejections under 35 USC §112, First Paragraph**

**Claims 1-4 and 6-9 were rejected under 35 USC §112, first paragraph, because the claims allegedly contain subject matter which was not described in the specification.**

Applicant respectfully traverses this rejection.

The recitation “wherein said gate electrode includes a first gate portion provided above said channel region and a second gate portion provided above ~~a region which is not in the semiconductor device overlying outside of a region which consists of~~ said channel region, said source region ~~[[or]]~~ and said drain region, and said second gate portion includes said P-N junction” was **incorporated into claim 1 from the original claim 5 amended as shown, the subject matter of which was indicated allowable in the First Office Action.** Fig. 1 and its relevant explanation in the specification at pages 4-6 describe the features in detail. Thus, the recitation has been described in the specification.

Therefore, the 35 USC §112, first paragraph rejection should be withdrawn.

#### **Rejections under 35 USC §112, Second Paragraph**

**Claims 1-4 and 6-9 were rejected under 35 USC §112, second paragraph, because claim 1 allegedly fails to clarify what is the region above which the second gate portion is provided.**

Claim 1 has been amended to overcome the rejection.

#### **Rejections under 35 USC §102(b)**

**Claims 1 and 7 were rejected under 35 USC §102(b) as being anticipated by Applicant Admitted Prior Art (AAPA).**

Applicant respectfully traverses this rejection.

In Fig. 4 (AAPA), the P-N junction 106 of the second gate electrode is covered with the conductive silicide 401. The P-type semiconductor region and the N-type semiconductor region

of the P-N junction are NOT electrically insulated on all sides. Thus, AAPA does not teach or suggest, among other things, “wherein said P-type semiconductor region and said N-type semiconductor region of said P-N junction of said gate electrode are electrically insulated on all sides.”

For at least these reasons, claim 1 patentably distinguishes over AAPA.

Thus, the 35 USC §102(b) rejection should be withdrawn.

#### **Rejections under 35 USC §103(a)**

**Claims 2 and 3 were rejected under 35 USC §103(a) as being obvious over AAPA in view of Kakumu (U.S. Patent No. 5,466,958).**

Applicant respectfully traverses this rejection.

Claims 2 and 3 depend from claim 1. Kakumu has been cited for allegedly disclosing that silicide is not formed on the P-N junction of the gate electrode. In Kakumu, however, it is the first gate portion overlying within the channel region that includes the P-N junction but NOT the second gate portion “provided overlying outside of a region which consists of said channel region.” Kakumu does not even show the gate portion which corresponds to the second gate portion. Therefore, Kakumu has nothing to do with the structure “wherein said gate electrode includes a first gate portion provided above said channel region and a second gate portion provided in the semiconductor device overlying outside of a region which consists of said channel region, said source region and said drain region, and said second gate portion includes said P-N junction.”

Application No. 10/084,925  
Amendment dated December 4, 2003  
Reply to Office Action of September 4, 2003

Thus, Kakumu not only does not remedy the deficiencies of AAPA but also gives no suggestion or motivation which concerns the P-N junction which is formed in the second gate portion provided overlying outside of said channel region, said source region or said drain region.

For at least these reasons, claims 2 and 3 patentably distinguish over AAPA and Kakumu.

Thus, the 35 USC §103(a) rejection should be withdrawn.

**Claim 6 was rejected under 35 USC §103(a) as being obvious over AAPA in view of Matloubian (U.S. Patent No. 5,144,390).**

Applicant respectfully traverses this rejection.

Claim 6 depends from claim 1, and Matloubian has been cited for allegedly disclosing “a body region formed of a semiconductor under said channel region; a buried insulating film provided under said body region, said source region, and said drain region; and a semiconductor substrate region provided under said buried insulating film.” Such a disclosure, however, does not remedy the deficiencies of AAPA discussed above.

For at least these reasons, claim 6 should patentably distinguish over AAPA and Matloubian.

Thus, the 35 USC §103(a) rejection should be withdrawn.

**Claims 8 and 9 were rejected under 35 USC §103(a) as being obvious over AAPA in view of Kakumu, and further in view of Cherne et al (U.S. SIR H1435).**

Applicant respectfully traverses this rejection.

Claims 8 and 9 depend from claim 6. Cherne et al has been cited for allegedly disclosing “a body contact region formed within said body region and having a higher impurity concentration than said body region” and “wherein said body contact region is formed in a region outside said second gate portion.” Such a disclosure, however, does not remedy the deficiencies of AAPA and Kakumu.

For at least these reasons, claims 8 and 9 patentably distinguish over AAPA, Kakumu and Cherne et al.

Thus, the 35 USC §103(a) rejection should be withdrawn.

It is submitted that nothing in the cited references, taken either alone or in combination, teaches or suggests all the features recited in each claim of the present invention. Thus all pending claims are in condition for allowance. Reconsideration of the rejections, withdrawal of the rejections and an early issue of a Notice of Allowance are earnestly solicited.

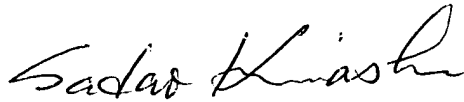
If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Application No. 10/084,925  
Amendment dated December 4, 2003  
Reply to Office Action of September 4, 2003

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. The fees for such an extension or any other fees which may be due with respect to this paper, may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Sadao Kinashi  
Attorney for Applicant(s)  
Reg. No. 48,075

SK/fs  
Atty. Docket No. **020277**  
1250 Connecticut Ave. N.W.  
Suite 700  
Washington, D.C. 20036  
(202) 822-1100

**38834**  
PATENT TRADEMARK OFFICE

Q:\2002\020277\020277 amendment 3.doc